MANAGING FILE/DATA COMPRESSION IN CD-BASED MULTIMEDIA APPLICATION.

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ABSTRACT (BAHASA MALAYSIA)

Kertas kerja ini bertujuan untuk melihat format-format fail yang sesuai bagi penghasilan sesebuah aplikasi multimedia di dalam cakera padat. Terdapat banyak masalah yang dihadapi oleh penghasil-penghasil aplikasi multimedia dalam menghasilkan tajuk cakera padat yang berkualiti, terutamanya dari segi saiz fail yang terlalu besar dan membawa kepada masalah lain iaitu masalah fail yang mengambil masa terlalu lama untuk dipindahturun.

Aplikasi multimedia merupakan aplikasi yang menggabungkan beberapa elemen seperti teks, gambar, suara, video dan animasi. Terdapat beberapa format fail telah dikenalpasti bagi setiap elemen ini. Dalam menentukan format fail yang akan digunakan dalam penghasilan sesebuah aplikasi multimedia berteraskan cakera padat ini, perbandingan telah dilakukan di antara format-format yang telah dikenalpasti. Perbandingan yang dilakukan bukan sahaja dari segi saiz fail yang dihasilkan, malah ia turut melibatkan penilaian dari segi kualiti yang bakal diterima oleh pengguna.

Bagi elemen grafik, format JPEG (.jpg) telah dikenalpasti sebagai format yang sesuai digunakan dalam penghasilan tajuk cakera padat. Elemen video perlu disimpan dalam format MPEG (.mpg) bagi mendapatkan video yang mudah untuk ditonton oleh pengguna tanpa mengabaikan kualiti yang bakal dihasilkan. Format MP3 (.mp3) sesuai digunakan bagi elemen audio

manakala format HTML (.htm, .html) sesuai bagi elemen teks. Bagi elemen animasi, fail disimpan dalam format FLICK (.fli, .flc) sebelum ditukarkan ke dalam format JPEG (.jpg) dan seterusnya dimanipulasi di dalam perisian pembangunan aplikasi seperti Macromedia Director.

ABSTRACT (ENGLISH)

The purpose of this thesis paper is to look at the most suitable file formats to be used in the development of a CD-ROM based multimedia application. A few problems encountered by the developers in producing a quality CD-ROM titles especially when dealing with the sizes of the files. Files that took a lot of space in the disk, normally will take quite some time to be downloaded.

Multimedia application is an application that combines elements such as text, graphics, audio, video and animation. A few file formats have been identified for each element. In determining the types of file format to be used in the development of a CD-ROM based multimedia application, comparison was made between these types of file formats. Comparison was not only made on the sizes of the files, but also to the quality of the files to be delivered to the users.

For the graphics element, the JPEG (.jpg) file format has been identified as the most suitable format to be used in the production of a CD-ROM title. The video element should be saved into the MPEG (.mpg) file format for the ease of viewing for the users without compromising on the quality of the video. The MP3 (.mp3) file format is suitable for audio files and the HTML (.htm, .html) file format is suitable for texts files. For the animation, files are saved

in FLICK (.fli, .flc) file format before being converted to JPEG (.jpg) file format. It is then manipulated in the authoring software such as Macromedia Director.

Acknowledgments

No significant achievement can be a solo performance especially when starting a project from ground up. This project has by no means been an exception. It took many very special people to enable it and support it. Here I would like to acknowledge their precious co- operation and express my sincere gratitude to them.

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My thanks to the Thesis Committee members for giving me the chance to produce this research study. Without your approval, I would not be producing this research topic that is considered important for the CD-ROM based application developers.

Dedications

This report is dedicated to:

The Multimedia Development Unit, Cosmopoint sdn Bhd

Baharum bin Mohd Dan

Siti Arbi binti Mohd Shariff

Raja Marthiah binti Raja Amran

Suzanna binti Baharum

Suhaily binti Baharum

Raja NurAzlin binti Raja Zainal Abidin

Saiful Anuar bin Baharum

Mohd Aidil Azrin bin Baharum

Wahib Zafar bin Yahaya

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

1.0 INTRODUCTION

1.1 Background

Multimedia is defined as any combination of text, graphic art, sound, animation and video delivered to you by computer or other electronic means. (Tay Vaughan, 1994). It requires large amounts of digital memory when stored in an end user's library, or large amounts of bandwidth when distributed over wires or glass fiber on a network. The Multimedia building blocks include text, graphic, animation, video and sound.

CD-ROM is one of the most cost-effective distribution medium for multimedia application. It is a non-volatile optical data storage medium using the same physical format as audio compact discs, readable by a computer with a CD-ROM drive. It is popular for distribution of large databases, software and especially multimedia applications. A CD-ROM can store around 650 megabytes of data and can contain as much as 74 minutes of full-screen video.

The contents of the thesis is for internal user only

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